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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHIMIZU, MATSUICHIRO

ART UNIT PAPER NUMBER

2635

DATE MAILED: 07/15/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

A

Office Action Summary

Application No.

09/732,978

Applicant(s)

CRUMB, ALAN C.

Examiner

Matsuichiro Shimizu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

The applicant provided no amendment.

Response to Arguments

Applicant's arguments filed on 8/23/2002 have been fully considered and examiners response is provided as follows:

Regarding applicant's argument (lines 18-29, page 2), the examiner maintains that both Hatcher and Wang teach wireless communication (Hatcher-1 col. 1, lines 55-57, remote control; and Wang-col. 1, lines 25-27; col. 3, line 65 to col. 4, line 2, Rf and IF, and IR) remote wireless transmitter, and these prior arts are combinable to teach transmission of PPM signal for the purpose of providing reliable wireless communication within the noisy electromagnetic environment.

Regarding applicant's argument (lines 3-11, page 3), the examiner maintains that Hatcher discloses a remote-operated control system having a master-control unit (col. 3, lines 23-35, receiver (27) transmitting signal (17) to valves and SPA THERM) and a remote control unit capable of radio transmission (col. 3, lines 23-35, transmitter (28)) there between for use with a pool or spa, comprising: said remote-control unit including a first signal via transmitter (col. 3, lines 23-35, transmitter (28)); and said master-control unit including a second signal via receiver

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(col. 3, lines 23–35, receiver (27)). That is, the applicant's argument addresses the claims as defined by the specification. However, the rejections are based on the broadest reasonable interpretation, one of ordinary skill in the art considers the "claimed invention" to be.

Regarding applicant's argument (lines 12–18, page 3), the examiner maintains the status of the spa such as whether the spa is on or off or the temperature of the water is not claimed in claims 1,2,5 and 9. Furthermore, Wang and Hatcher are combinable within the wireless communication environment, and therefore, Wang in view of Hatcher teach status signal and command signals associated with video data in an interactive fashion (Wang–col. 4, lines 2–5, data exchange in interactive fashion).

Regarding applicant's argument (lines 19–31, page 3), the examiner maintains that Hatcher, Wang and Tompkins teach remote communication (Hatcher–1 col. 1, lines 55–57, remote control; and Wang–col. 1, lines 25–27, Rf and IF, and IR; and Tompkins–col.1, lines 14–18, spa control system) remote transmitter, and these prior arts are combinable to teach radio wave transmission and status display. That is, the applicant's argument addresses the claims as defined by the specification. However, the rejections are based on the broadest reasonable interpretation, one of ordinary skill in the art considers the "claimed invention" to be.

Therefore, the rejection of claims 1-16 follows:

Claim Rejections – 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatcher (4,404,697) in view of Wang et al. (6,219,380).

Regarding claims 1, Hatcher discloses a remote-operated control system having a master-control unit (col. 3, lines 23-35, receiver (27) transmitting signal (17) to valves and SPA THERM) and a remote control unit capable of radio transmission (col. 3, lines 23-35, transmitter (28)) there between for use with a pool or spa, comprising: said remote-control unit including a first signal via transmitter (col. 3, lines 23-35, transmitter (28)); and said master-control unit including a second signal via receiver

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(col. 3, lines 23–35, receiver (27)). But Hatcher does not disclose pulse position modulated transceiver.

However, Wang discloses, in the art of communication system, pulse position modulated transceiver (col. 1, lines 25–27, RF wireless communication systems; col. 4, lines 6–25, PPM transceiver) for the purpose of providing two-way communication. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include pulse position modulated transceiver in the device of Hatcher as evidenced by Wang because Hatcher suggest transmitter for remote control receiver for master control for one-way communication and Wang teaches pulse position modulated transceiver for the purpose of providing two-way communication.

Regarding claim 2, Hatcher in view of Wang continues, as disclosed in claim 1, to disclose said remote-control unit and said master-control unit communicate bi-directional with pulse position modulated radio signals (Wang-col. 1, lines 25–27, RF wireless communication systems; col. 4, lines 6–25, PPM transceiver (100)), using distributed data processing (Hatcher-col. 3, lines 1–14, receiver (27) distributing data signals via electrical lines 18, 21, 24 and 26).

Regarding claim 5, Hatcher continues, as disclosed in claim 1, to disclose the system, wherein said remote-control unit comprises a keypad that enables a user to

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send at least one control signal to said master-control unit (col. 5, lines 48-59, controlling the jet action and light via keypad 29-31, 41 and 42 keys on transmitter 28).

All subject matters in claim 9 are disclosed in claims 1-2 and 5, and therefore, rejections of the subject matters expressed in claim 9 are met by references and associated arguments applied to rejections of claims 1-2 and 5.

2. Claims 3-4, 6-8 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatcher in view of Wang as applied to claim 3 above, and further in view of Tompkins et al. (5,559,720).

Regarding claim 3, Hatcher continues, as disclosed in claim 1, to disclose the light at the bottom central portion of the spa that enables a user to ascertain the status of at least one operating parameter of a pool or spa (col. 1, lines 5-37, operation of spa via light on via On/off control switches of transmitter). But Hatcher in view of Wang does not disclose a display that enables a user to ascertain the status of at least one operating parameter of a pool or spa.

However, Tompkins discloses, in the art of spa control system, a display that enables a user to ascertain the status of at least one operating parameter of

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a pool or spa (Fig. 5, col. 46, line 46 to col. 8, line 51, display current state) for the purpose of providing spa status. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a display that enables a user to ascertain the status of at least one operating parameter of a pool or spa in the device of Hatcher as evidenced by Tompkins because Hatcher in view of Wang suggest the light at the bottom central portion of the spa that enables a user to ascertain the status of at least one operating parameter of a pool or spa and Tompkins teaches a display that enables a user to ascertain the status of at least one operating parameter of a pool or spa for the purpose of providing enhanced spa status.

Regarding claim 4, Tompkins continues, as disclosed in claim 3, to disclose said display enables the user to determine the temperature of water in the pool or spa (Fig. 5, col. 8, lines 25–51, display current reading of spa temperature).

Regarding claim 6–8, Hatcher continues, as disclosed in claim 5, to disclose said remote-control unit comprises a keypad that enables a user to send at least one control signal to said master-control unit (col. 5, lines 48–59, controlling the jet action and light via keypad 29–31, 41 and 42 keys on transmitter 28). But Hatcher in view of Wang does not disclose the system of claim 5, wherein the control signal tells said

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master-control unit to turn a spa heater on or off; to turn spa jets on or off; and to turn a spa light on or off.

However, Tompkins discloses, in the art of spa control system, the system, wherein the control signal tells said master-control unit to turn a spa heater on or off (col. 5, lines 50-65, spa heater); to turn spa jets on or off (col. 16, lines 39-61, spa jets); and to turn a spa light on or off (col. 17, line 56 to col. 18, line 5, spa light) for the purpose of remote control of spa. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a display that enables a user to ascertain the status of at least one operating parameter of a pool or spa in the device of Hatcher as evidenced by Tompkins because Hatcher in view of Wang suggest the light at the bottom central portion of the spa that enables a user to ascertain the status of at least one operating parameter of a pool or spa and Tompkins teaches the system of claim 5, wherein the control signal tells said master-control unit to turn a spa heater on or off; to turn spa jets on or off; and to turn a spa light on or off for the purpose of remote control of spa.

All subject matters in claim 10 are disclosed in claims 1-3, 5 and 9, and therefore, rejections of the subject matters expressed in claim 10 are met by references and associated arguments applied to rejections of claims 1-3, 5 and 9.

Claim 11 recite a method of operation corresponding to pulse position modulated dual transceiver remote control of claims 1-3. The method claimed is obvious in that it simply follows the logical implementation of pulse position modulated dual transceiver remote control indicated in the claims in performing each of the functional operations of pulse position modulated dual transceiver remote control. Accordingly, the inventive embodiments set forth in claim 11 are met by the cited references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claim 11 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 1-3.

Regarding claim 12, Hatcher continues, as disclosed in claim 11, to disclose the method, wherein said transmitting steps and said sending step are performed when the remote-control unit is situated inside a building (Fig. 1, remote control (28) in side the house; col. 1, lines 23-37, remote location inside the house) and the master-control unit is situated outside of the building (Fig. 1, master control (27) in outside the house; col. 1, lines 23-37, the recirculating operation as well as turn on the spa light associated with control outside the house).

Claims 13-15 recite a method of operation corresponding to pulse position modulated dual transceiver remote control of claims 6-8 and 11. The method claimed is obvious in that it simply follows the logical implementation of pulse position modulated dual transceiver remote control indicated in the claims in performing each of the functional operations of pulse position modulated dual transceiver remote control. Accordingly, the inventive embodiments set forth in claims 13-15 are met by the cited references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claims 13-15 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 6-8 and 11.

Regarding claim 16, Tompkins continues, as disclosed in claim 11, to disclose sending a signal requesting the water temperature of the pool or spa (Fig. 5, col. 8, lines 25-51, display current reading of spa temperature requested by the display module; col. 8, lines 25-38, spa heating control via temperature sensing upon request generated at set-time in the main program).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matsuichiro Shimizu whose telephone number is (703) 306-5841. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik, can be reached on (703-305-4704). The fax phone number for the organization where this application or proceeding is assigned is (703-305-3988).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703-305-8576).

Matsuichiro Shimizu



July 14, 2003

MICHAEL HORABIK
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